UNIT-V DATA ANALYSIS

Unit-5

Two marks

1. Define correlation

Correlation is a statistical ~~measur~~ method or a technique that measures a quantitative relationship between different variables, such as demand and price

2. Explain the methods for calculating the coefficient of correlation.

Ans (i) Scatter diagram

(ii) Karl person's coefficient

(iii) Rank correlation coefficient.

3) Types of correlation

(i) Positive correlation - when two variables change in the same direction

(ii) Negative correlation :- when two variables change in opposite directions.

(iii) No correlation - when there is no relationship between two variables.

4) Define coefficient of correlations.

Soln: Coefficients of correlation measures the natural relationship between two variables and it is denoted by r. The correlation lies between −1 and 1.

5. What is a scatter diagram? Mention its uses.

Soln: A scatter diagram also known as a scatter plot is a type of graph used to represent the relationship between two variables. It helps to identify patterns, trends or correlations between the variables.

6. Define Regression.

Soln Regression is a statistical method used to analyse and understand the relationship between two or more variables. It helps to predict the value of a dependent variable based on the values of one or more independent variables.

7) Two uses of Regression analysis.

Soln a) Prediction:- Regression helps to predict the value of a dependent variable based on the value of one or more independent variables

b) Understanding Relationships:- It identifies and quantifies the strength and type of relationships between variables

8) Define covariance Matrices

It is a square matrix that shows the covariance between different variables in a dataset. It is used to measure the relationship between multiple variables